

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/05001

A. CLASSIFICATION OF SUBJECT MATTER  
Int.Cl<sup>7</sup> B62D5/04, G01B7/30

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
Int.Cl<sup>7</sup> B62D5/00-5/30, G01B7/00-7/34, F16H1/00-1/26

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
Jitsuyo Shinan Koho 1922-1996 Jitsuyo Shinan Toroku Koho 1996-2003  
Kokai Jitsuyo Shinan Koho 1971-2003 Toroku Jitsuyo Shinan Koho 1994-2003

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 05-229445 A (Toyota Motor Corp.), 07 September, 1993 (07.09.93), Full text; Figs. 1 to 7 (Family: none)	1-7
A	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 47497/1987 (Laid-open No. 155009/1988) (Tokai Rika Co., Ltd.), 12 October, 1988 (12.10.88), Full text; Figs. 1 to 5 (Family: none)	1-7
A	US 5979587 A (Liubakka et al.), 09 November, 1999 (09.11.99), Full text; Figs. 1 to 5 (Family: none)	1-7

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:  
"A" document defining the general state of the art which is not  
considered to be of particular relevance  
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date  
"L" document which may throw doubts on priority claim(s) or which is  
cited to establish the publication date of another citation or other  
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means  
"P" document published prior to the international filing date but later  
than the priority date claimed

"T" later document published after the international filing date or  
priority date and not in conflict with the application but cited to  
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"X" document of particular relevance; the claimed invention cannot be  
considered novel or cannot be considered to involve an inventive  
step when the document is taken alone  
"Y" document of particular relevance; the claimed invention cannot be  
considered to involve an inventive step when the document is  
combined with one or more other such documents, such  
combination being obvious to a person skilled in the art  
"&" document member of the same patent family

Date of the actual completion of the international search  
30 June, 2003 (30.06.03)

Date of mailing of the international search report  
15 July, 2003 (15.07.03)

Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/35877 A1 (Tokumoto), 28 March, 2002 (28.03.02), Full text; Figs. 1 to 15 & JP 2002-107112 A Full text; Figs. 1 to 15	1-7
A	JP 2001-287660 A (Toyota Motor Corp.), 16 October, 2001 (16.10.01), Full text; Figs. 1 to 10 (Family: none)	1-7
E, A	JP 2003-65753 A (Showa Corp.), 05 March, 2003 (05.03.03), Full text; Figs. 1 to 4 (Family: none)	1-7